

Air-born water
PFOA: not
Action level EPA: 0.5 PPB
Delaware DEP: 0.04 PPB
Dupont sample level
A.S. population - 5.0 PPB

PFOA project dealing with specifically the teflon constituent of Perfluoro-Octanoic Acid (PFOA) DEP drinking water standard of 0.04 ppb. PFOA was used as the process aid in the making of the standard Fluoro-Elastomer at various manufacturing buildings.

C8 is another name for ammonium perfluorooctanoate, or PFOA. DuPont has used the chemical since the 1950s at its Washington Works plant south of Parkersburg. C8 is a processing agent used to make Teflon and other nonstick products, oil-resistant paper packaging and stain-resistant textiles.

Researchers are finding that people around the world have C8 in their blood in low levels. Evidence is mounting about the chemical's dangerous effects, but regulators have not set a federal standard for its safety.

Tens of thousands of Mid-Ohio Valley residents have elevated levels of the toxic chemical C8 in their blood, a landmark new health study has confirmed.. We can't explain all of the health effects, and I'm concerned that the level is high in the very young," Emmett said during a public meeting at the time. "We may not be able to say it's harmful, but do we know it's safe? That's another thing

The C8 Health Project is a multi-year effort to examine the chemical's possible effects on Mid-Ohio Valley residents. It is funded by major portions of a \$107.6 million settlement paid by DuPont to settle a lawsuit alleging the company poisoned residents' drinking water. The settlement also is funding a related examination by a three-person science team of possible C8 links to adverse health effects.

5/28/8 fact-finding meeting in Trenton. DEP: Frank, Ann. Dupont: Tom etc.

1. Is there a adverse health effect attributed to PFOA? No.
2. How is the process even started without the cause-effect established?

A lawsuit was settled in 2002 about xxx. Dupont lawyer wanted to get out of this by provide money to study the health effect of elevated level of PFOA in blood. This is the only result we have gotten in 2008. Is PFOA air born or in the water, no answer yet. NJDEP has an interim drinking water of 0.04 ppb without even a scientific experiment performed or scientific understanding achieved. As a result of 2003 settlement, Dupont Chamber voluntarily started the process by submitting to DEP a workpan to investigate surreal PFOA issue who simple follows the suite. Dupont is the ONLY entity in NJ addressing the PFOA contamination issue.

To put it differently, Dupont volunteer the role in working with EPA HQ risk assessment science group in developing the drinking water standard for PFOA, which currently has not even been determined conclusively cause any health problem, although been suspicious may cause health problem. Is PFOA air-deposited, not transported thru groundwater? DEP does not know what to do with the project. Dupont proposed a 5 convenient locations for new well, which Frank readily agreed, and added another one just as easy.

The project is essentially prompted by Dupont own initiative, which DEP readily signed in, and now DEP has the lead, although EPA will keep an eye on it, as it is a news in W Virginia, and could potentially become a high public interest here in NJ. While we know there has not even adverse health effect of PFOA been established. Since PFOA is not RCRA HW or constituent, at least currently, it seems logical that RCRA CA is NOT the one to get involved, as DEP is delegated for water program. EPA R2 water or air people may get involved, just as Region 3 water and air program are now

7/28/08 meeting among EPA Region 3, Region 2 and DEP.

DEP number is 0.04 ppb, EPA Region 3 action level is 0.5 ppb, and think this stuff is air-deposited. The number getting from Deepwater is 1.4 ppb. This created a very sticky situation. We do not get into this, if it is determined a water permit or an air issue. Level found in the blood in people in WV is between 300-370 ppb, which is much

higher than 5.0 ppb found in the blood of the general US population

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DEP has the tentative standard (called delineation) which is contained in the 2007 guidance of 0.04 ppb. DEP science and research group developed their tentative PFOA number based on some calculations of university animal toxicology studies, and came up with a more conservative number. Not too sure of the meaning of the number, DEP called it, not final or interim, but delineation limit. EPA HQ has been working on its own study which supposedly is a much more rigorous process. Dupont did their own epidemiological study of many Dupont employees who have much higher PFOA levels in their blood, but have no known health problems. The W. Virginia study have the PFOA reading in blood for 70,000, but there is no adverse health effect of PFOA has been established. But NJDEP may want to go ahead with its own PFOA standards which, may run risk to be very different from that of EPA's. How do you ask company to investigate when you do not even know what PFOA causes. It is a strictly a NJDEP initiative, and Dupont is the only company is required to investigate when many companies is also using the PFOA in their manufacturing processes. In some way, Dupont is participating a EPA study of PFOA,

Barry:

Sorry, I could not see you in 15 minutes, as I was on the phone with Tom and Frank Furman.

Anyway, I attended the PFOA meeting in Trenton yesterday. I am glad that EPA is not the lead for this rather dubious project.

Previous off-site found concentration of PFOA up to 1.4 ppb in water, while DEP preliminary health-based, tentative drinking standard for PFOA is 0.04 ppb. Since DEP is not too sure of its implication, they called this standard a "delineation limit". EPA HQ has been working on its own toxicological study of PFOA which supposedly is a more rigorous process than DEP's simple recalculation of some university's studies of PFOA. So far, there is NO adverse health effect has been established for PFOA by anybody. Dupont is the only company in NJ who is now investigating the PFOA, when many other companies are also using the PFOA in their manufacturing processes. It is not clear whether PFOA is also air borne or just in the water. In some way, Dupont is really participating a EPA toxicological and risk assessment study of PFOA, which may lead to the development of some standard for PFOA in the future. It is apparent that DEP does not really know what to do with the phantom PFOA standard which is neither final or interim or meaningful in its implementation. Frank basically said whatever additional sampling Dupont proposes to do is OK with him. If the water standard is 1 ppb, then the Chamber Works is probably OK, based on current sampling data.

Sin-kie

Karen Johnson, EPA Region 3, discussed the Safe Drinking Water Act Consent Order that they negotiated with DuPont when Barry with them and NJDEP on July 30, 2008. It is important that Region 2 and NJDEP assess the applicable authorities and agree on leads and roles for the various groups. NJDEP has requested a meeting to discuss this, but it will require input and agreement from the managements of both EPA and NJDEP.

PFOA, also known as C-8, has been found in the groundwater in the vicinity of DuPont in Deepwater, NJ and in the blood of customers of the water supply company in the vicinity of DuPont. PFOA had been detected in the vicinity of the DuPont Washington Works facility in West Virginia and we met with EPA Region 3 on July 30 to discuss their approach to addressing the problem. A Consent Order under the Safe Drinking Water Act was issued by Region 3 in

2002 with an action level of 150 ppb, but based on additional information, the level was revised to 0.5 ppb in a new 2006 Order (see Fact Sheet, below). Treatment systems have been installed on several public water supplies in West Virginia and Ohio as part of a settlement of a private civil action. EPA's Science Advisory Board is conducting a risk assessment, but until it is completed in several years there will be no reference dose or MCL.

NJDEP has established a preliminary health based guidance level for PFOA in drinking water of 0.04 ppb, and concentrations of up to 1.4 ppb have been detected off-site. PFOA is not a regulated drinking water contaminant or a RCRA hazardous waste and the transport mechanism is believed to be through air deposition. Region 3 has been keeping the Region 2 Water Compliance Branch apprised of progress but there is a law suit in New Jersey and EPA and NJDEP need to agree on a strategy and leads and roles for the various groups. 5.0 ppb PFOA is found in the general US population, and 350 ppb found in the West Virginia people near the Dupont plant

9/8. I had spoken to Al Boettler, DuPont, and asked him if DuPont would be willing to agree to an Order like the one with Region 3, which requires that DuPont take certain actions (like providing bottled water or installing treatment equipment) when PFOA in water supplies exceed .5 ppb. He called back on Friday and said that they would. However, Al said that DuPont would not be willing to agree to the .04 ppb that NJDEP wants to use as a preliminary health based guidance level for PFOA in drinking water. While both of these numbers are health based, one is based on chronic exposure and the other on acute (or subchronic) exposure.

It is currently unclear what EPA and NJDEP roles will be in enforcing PFOA and what standards will be used. The NJDEP Site Remediation Program is the NJDEP lead for obtaining groundwater monitoring results, although the main pathway to the groundwater is suspected to be through air deposition. NJDEP is the lead for drinking water but there is no agreement between the NJDEP and EPA Drinking Water Programs on coordination procedures. The EPA RCRA Program has been receiving the PFOA monitoring data and DuPont (Deepwater) is an EPA lead for RCRA corrective action, but PFOA is neither a RCRA hazardous waste nor a RCRA hazardous constituent.

Frank Faranca, NJDEP Site Remediation Program, will be asking the NJDEP Drinking Water Program to communicate with the EPA Drinking Water Program about coordination. There then, needs to be discussion between the relevant EPA and NJDEP programs on how to proceed. Barry

9/8

Gentlemen: I believe you've seen some information concerning PFOA detections in groundwater in the vicinity of the DuPont Chambers Works facility. Nicole Kraft, Barry Tornick, Sin-kie Tjho (RCRA project manager) and I had a brief meeting last week, and Barry provided a summary of his follow-up action below. Barry was invited to a meeting with NJDEP and EPA Region 3 in late July to discuss similar concerns at the DuPont facility in Parkersburg, WV, and the enforcement action Region 3 took under SDWA authority.

As a RCRA-regulated treatment/storage/disposal facility, we coordinate with DEP's site remediation program on cleanup activity at the facility. However, the federal RCRA program may be limited from more direct involvement for reasons Barry describes above.

We believe the ball is in DEP's court; it can take direct enforcement action and look for EPA's support of this action, or DEP can ask EPA to take the lead on enforcement as West Virginia did of Region 3.

At some point when we get more information from DEP, we should get together to discuss, and then plan to brief Walter or Barbara, and Dore. Adolph